ED 474 755

TITLE Report on Alternative Admissions Criteria Study.

INSTITUTION Texas State Higher Education Coordinating Board, Austin.

PUB DATE 2000-10-00

NOTE 17p.; Prepared by the Participation and Success Division,

Access and Equity Department.

AVAILABLE FROM For full text: http://www.thecb.state.tx.us/reports/

pdf/0314.pdf.

PUB TYPE Reports - Research (143)

EDRS PRICE EDRS Price MF01/PC01 Plus Postage.

DESCRIPTORS *Academic Achievement; *Admission (School); Admission

Criteria; College Students; *Core Curriculum; *Grade Point Average; Grades (Scholastic); *High School Students; High

Schools; Higher Education; *Prediction; Test Use

IDENTIFIERS Texas

ABSTRACT

This study reviews alternative admissions criteria that can be used to predict collegiate success. Data are from a 1999 review of Bachelor's Degree Attainment conducted by the U.S. Department of Education, the Texas Higher Education Coordinating Board's data on college students, and the Texas Education Agency's Public Education Information Management System. Analysis suggests that the type of high school diploma a student receives is an important predictor of collegiate success, and should be taken into consideration in the admissions process. The data suggest that students who take a more rigorous high school curriculum (in comparison with less rigorous curricula) are: (1) more likely to enroll in higher education after graduating; (2) more likely to have aspirations for a bachelor's degree; (3) more likely to have a higher first-year college grade point average; (4) more likely to be retained from fall to fall; (5) more likely to persist after 2 years of collegiate study; and (6) more likely to complete a bachelor's degree. Unlike a one-time assessment, such as a timed standardized test, the high school diploma represents performance over an extended period of time. The rigor of a student's high school curriculum may be a useful indicator of the admissions process. The high school diploma type, which is an indicator of a student's level of preparation, may be used in addition to other criteria, including standardized test scores to make admissions decisions, and where appropriate, as a substitute for standardized tests. (SLD)



Report on Alternative Admissions Criteria Study

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October 2000



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Coordinating Board Mission

The mission of the Texas Higher Education Coordinating Board is to provide the Legislature advice and comprehensive planning capability for higher education, to coordinate the effective delivery of higher education, to efficiently administer assigned statewide programs, and to advance higher education for the people of Texas.

THECB Strategic Plan

Coordinating Board Philosophy

The Texas Higher Education Coordinating Board will promote access to quality higher education across the state with the conviction that access without quality is mediocrity and that quality without access is unacceptable. The Board will be open, ethical, responsive, and committed to public service. The Board will approach its work with a sense of purpose and responsibility of the people of Texas and is committed to the best use of public monies.

THECB Strategic Plan



Executive Summary

This study reviews alternative admissions criteria that can be used to predict collegiate success. The controversy surrounding the use of standardized tests gives higher education the opportunity to continue to develop multiple ways of assessing student ability to insure the broadest possible access to higher education while simultaneously ensuring that students who enter collegiate study will be successful.

Analysis suggests that the type of high school diploma a student receives is an important predictor of collegiate success, and should be taken into consideration in the admissions process. The data suggest that students who take a more rigorous high school curriculum (in comparison with less rigorous curricula) are:

- more likely to enroll in higher education (community college or university) after graduating;
- more likely to have aspirations for a bachelor's degree;
- more likely to have a higher first-year college GPA;
- more likely to be retained from fall to fall;
- · more likely to persist after two years of collegiate study; and
- · more likely to complete a bachelor's degree.

Additionally, unlike a one-time assessment, such as a timed standardized test, the high school diploma represents performance over an extended period of time.

The rigor of a student's high school curriculum may be a useful indicator of the admissions process, especially because a standardized test score may not be an accurate indicator of a student's academic ability or academic potential. The high school diploma type, which is an indicator of a student's level of preparation, may be used in addition to other criteria including standardized test scores to make admissions decisions, and where appropriate, as a substitute for standardized tests.



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INTRODUCTION

Rider 18 of House Bill 1, 76th Texas Legislature ("Appropriations Act"), page III-51 provided for an Alternative Admissions Criteria Study to identify possible alternative admissions criteria, including supporting methodologies, that would better predict collegiate success. This study is intended to meet that requirement.

The national debate on the use of racial preferences in college and university admission decisions centers on the variance in the performance of Whites and particular racial and ethnic minorities on standardized admissions tests such as the SAT and ACT. Historically, White and Asian students have scored higher than African- American and Hispanic students on these tests. The disproportionate impact of standardized tests, coupled with policy decisions and legal challenges to the use of race as a factor in the admissions process, has focused attention on the appropriate use of standardized tests in the admissions process.

The decrease in African-Americans and Hispanic students at selective public higher education institutions in Texas after the *Hopwood* decision in 1996 prompted the higher education community to search for alternative admission criteria that would identify students whose test scores might not reflect their full academic ability. Among these efforts was the 75th Texas Legislature's passage of House Bill 588, now codified at Texas Education Code, Chapter 51, Subchapter S, Section 51.802, which guarantees admission to students who graduate in the top 10 percent of their high school graduating class, regardless of their performance on standardized tests.

The top 10 percent law also provides 18 alternative admission criteria, including standardized test scores that can be used to increase diversity in higher education. Additionally, the Texas Higher Education Coordinating Board Advisory Committee on Criteria for Diversity in their 1997 report *Alternative Diversity Criteria: Analyses and Recommendations* also identified alternative admissions criteria that might be used to increase diversity at public higher education institutions in Texas. While the criteria identified in the top 10 percent law and in the Advisory Committee on Diversity Criteria's report would likely enroll additional African-American and Hispanic students, most of the alternative criteria cannot predict how a student might perform in the initial year of college. In addition to access, however, it is equally important that students have the ability to be successful in their studies and receive a credential.

One alternative admissions criterion, however, can predict collegiate success—the high school curriculum taken by a student as reflected in the high school diploma type. The type of high school diploma students opt to take often indicates whether the student will have the necessary skills to be successful in the initial years of collegiate study. Further analysis provides insights into the relationship between Texas high school preparation and different measures of college success.



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STUDENT DATA COLLECTED

Data used in this study came from 1) a 1999 review of Bachelor's Degree Attainment conducted by the US Department of Education (DOE), 2) the Texas Higher Education Coordinating Board's data collected on college students, and 3) the Texas Education Agency's Public Education Information Management System (PEIMS).

The PEIMS data consisted primarily of diploma types earned by high school students graduating in 1997:

- The Regular diploma is designed to fulfill the requirements for a high school diploma, but not specifically to prepare students for college-level work. Students pursuing this diploma take most of the high school core courses.
- The Advanced diploma data consisted of students who graduated with either the Advanced diploma or the Recommended High School Program diploma. These diploma programs are designed to prepare students for college-level work based on completion of high school core courses. Beginning in the 1999-2000 academic year the Advanced diploma was eliminated. The high school core courses are shown below in Table 1.
- The Advanced with Honors diploma data in this study consisted of students who graduated
 with either the Advanced with Honors diploma or the Distinguished Achievement diploma.
 These diploma programs are designed to prepare students for college-level work based on
 completion of high school core courses and advanced placement (AP) courses.
 Beginning in the 1999-2000 academic year, the Advanced with Honors diploma was
 eliminated.

Table 1. Texas Public High School Core Courses, 1997

Math Core	English Core	Social Studies Core	Science Core
Algebra I Geometry Algebra II	English I (9th Grade) English II (10th Grade) English III (11th Grade) English IV (12th Grade)	World Geography (9th Grade) World History (10th Grade) U.S. History (11th Grade) U.S. Government (12th Grade) Economics (12th Grade)	Biology I Biology II Chemistry I Chemistry II Physics I Physics II Physical Science

To graduate, high school students pursuing either the Regular or Advanced diploma are typically required to complete four courses in English, three courses in social studies, three courses in math, and three courses in science, but not necessarily the courses that define the core areas. For example, high school graduates earning a Regular diploma in 1997 could have fulfilled their math requirements with some non-core courses that are pre-requisites to Algebra I, which is the lowest course in the math core area. In comparison, students seeking an Advanced or Advanced with Honors diploma could have also completed their graduation requirements with non-core courses. However, these non-core courses typically are "advanced courses" that require students to have completed some or all of a core area. Table 2 below outlines these non-core courses that typically require completion or partial completion of core courses as pre-requisites.



Table 2. Texas Public High School Non-Core Courses, 1997

Advanced Math Non-Core Courses	English Non-Core Courses	Social Studies Non-Core Courses	Science Non-Core Courses
Trigonometry	Research/Technical Writing	American Culture Studies	Anatomy
Elementary Analysis	Creative/Imaginative Writing	Advanced Texas Studies	Environmental Science
Analytical Geometry	Practical Writing	World Area Studies	Applied Biology
Pre-Calculus	Literary Genres	Psychology	Science III
Calculus	Journalism	Advanced Social Science	Science IV
Computer Math I	Speech Communication	Sociology	Geology
Computer Math II	Debate I		Meteorology
Probability & Statistics	Debate II		Astronomy
Number Theory	Debate III		Marine Science
Linear Algebra			Intro Physical Science
Linear Programming			
Survey of Mathematics	i		



LIMITATIONS AND ASSUMPTIONS

As in most research, there are limitations and assumptions underlying this study. For example, the study assumes that all of the high school graduates were enrolled during all four years in the Texas public school system. Other limitations and assumptions include:

- Some high school graduates may have enrolled in college for the first time in the fall of 1998 or later, and therefore the findings may be incomplete.
- High school course grades are not included for analysis in this study, and therefore the findings should be considered with caution.
- The rigor of individual courses has not been assessed.
- The study assumes that high school graduates who did not complete the math core
 fulfilled their high school graduation math requirement with pre-algebra courses that are
 not designed to prepare students for college-level work. The non-core math courses
 listed previously do not contain any of these pre-algebra courses.
- This study reports mostly on one cohort of students. It is assumed that this cohort is typical of students who graduated with these diploma types.
- Findings on degree completion come from a different cohort which may not have similar characteristics as the cohort in other findings.
- The positive relationships in this study between type of high school diploma and measures of college success (as in all correlational studies) do not necessarily infer cause and effect relationships.
- This study does not include students who attended private or out-of-state institutions.

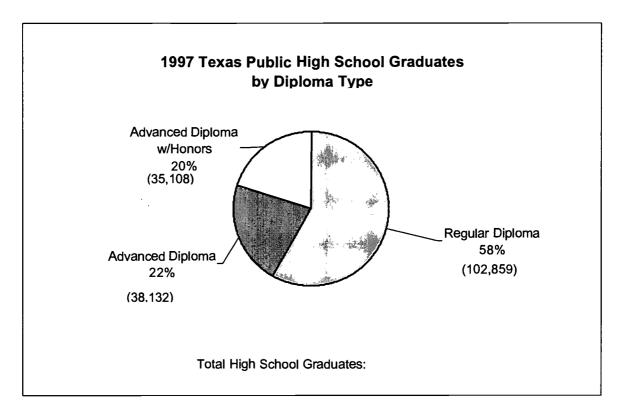


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FINDINGS OF THE STUDY

The 1997 Texas Public High School Graduate Population

The chart below shows the number and distribution of 1997 high school graduates who earned a Regular, Advanced, or Advanced with Honors diploma.



Of the 176,099 Texas public high school graduates in 1997, over one-half (58 percent) earned a Regular Diploma, which is the least rigorous of the three diploma types.

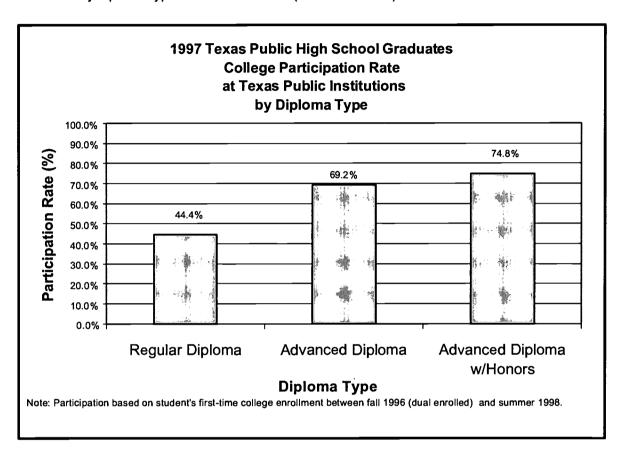
The remaining diplomas were about evenly divided between Advanced (22 percent) and Advanced with Honors (20 percent); these high school programs are designed to prepare students for college. The concern reflected by this data is that too few of our high school graduates are taking the appropriate curriculum that will best prepare them for collegiate study—as reflected by the smaller number of students with the Advanced and Advanced with Honors diplomas.



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College Participation Rates

The graph below shows the college participation rate for Texas public high school graduates from 1997 by diploma type between fall 1996 (dual enrollment) and summer 1998.



The data indicate that high school preparation is directly related to college participation.

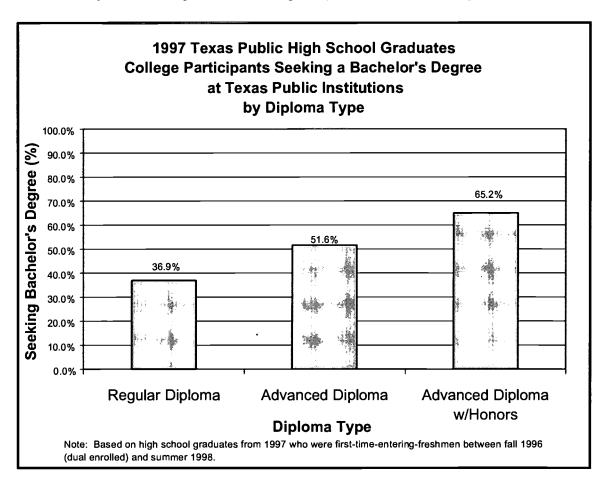
In 1997, the 102,859 Texas high school graduates who earned a Regular diploma had the lowest college participation rate 44.4 percent at a Texas public institution of higher education. Of the 38,132 Texas high school graduates with an Advanced diploma, 69.2 percent participated in a Texas public institution of higher education. Meanwhile, the 35,108 Texas high school graduates who earned an Advanced with Honors diploma had the highest participation rate, 74.8 percent.



Aspirations for Bachelor's Degree

Of the 176,099 Texas public high school graduates in 1997, 98,296 or 55.8 percent enrolled in a Texas public institution of higher education between the fall 1996 (dual enrolled) and through the following year ending in summer 1998. These new college students included 45,659 with a Regular diploma, 26,371 with an Advanced diploma, and 26,266 with an Advanced with Honors diploma. These 98,296 students served as the cohort for measuring college intention and success by diploma type.

The following graph shows a percentage breakdown of the cohort, by degree type, who indicated they were seeking a bachelor's degree upon entrance into college.



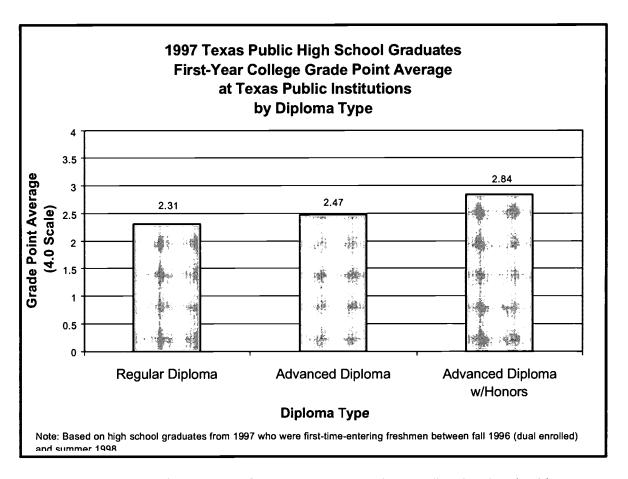
The data indicate that higher levels of high school preparation are directly related to college aspirations of obtaining bachelor's degrees.

Only 36.9 percent of students with a Regular diploma (non-college prep) aspired to earn a bachelors degree, compared to 51.6 percent of students with an Advanced diploma and 65.2 percent of students with an Advanced with Honors diploma.



First-Year College GPA

The following graph shows the grade point average (GPA) earned by the cohort in their first year of college course work by diploma type.



The data indicate that higher levels of high school preparation are directly related to higher grade point average.

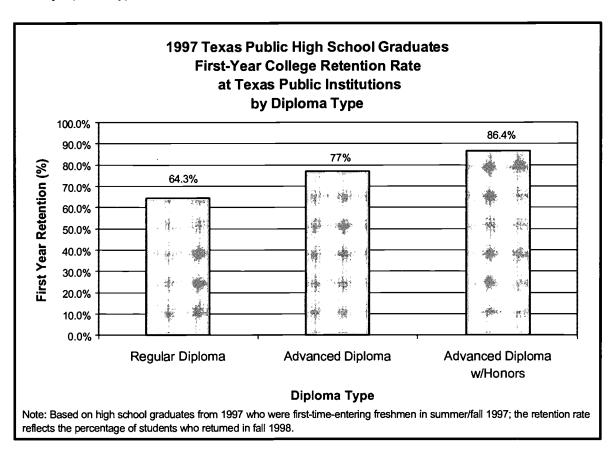
Texas high school students with a Regular diploma (non-college prep) had the lowest GPA (2.31), compared to students with an Advanced (2.47) or Advanced with Honors (2.84) diploma.



First-Year College Retention

One measure of retention is the number of students who enrolled in their second fall semester when compared to the total students who enrolled for the first time in the previous year, summer and fall semesters. Of the 98,296 Texas high school graduates from 1997 who enrolled in a Texas public institution of higher education between the fall 1996 (dual enrolled) and summer 1998, 72,431 enrolled for the first time in the summer or fall of 1997, and only these students are considered in the analysis below. These college participants included 32,911 students with a Regular diploma, 19,922 students with an Advanced diploma, and 19,598 with an Advanced with Honors diploma.

The following graph shows the percentage of these college students who returned in fall 1998 by diploma type.



The data indicate that higher levels of high school preparation are directly related to higher retention rates.

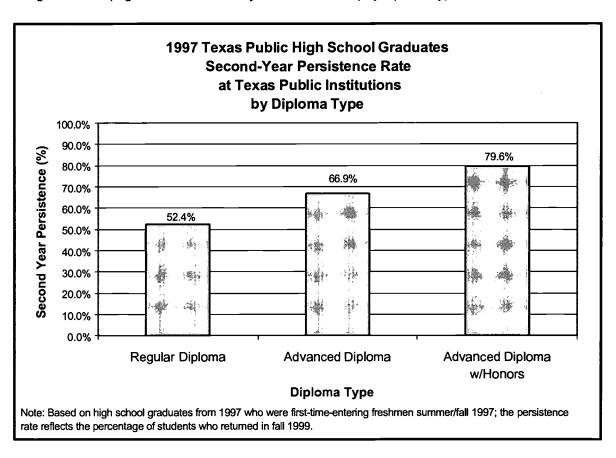
Texas high school students in this sample who earned a Regular diploma (non-college prep) had the lowest first year retention rate at 64.3%. Approximately 77 percent of students with an Advanced diploma and 86.4 percent of students with the Advanced with Honors diploma were retained.



College Second-Year Persistence

Second-year college persistence is defined as the number of students who enrolled in the fall semester compared to the total number of students who enrolled for the first time two years prior, in the summer and fall semesters. These students are persisting through their second year of academic study, though they may not have been continuously enrolled. It is possible for the student to have opted out for one or more semesters but return in the fall two years after they initially enrolled. As stated earlier, 72,431 of the entire 1997 cohort enrolled for the first time in the summer or fall of 1997.

The following graph shows the percentage of these college students who were enrolled in college fall 1999 (regardless of their first-year-retention rate) by diploma type.



The data indicate that higher levels of high school preparation are directly related to higher second year persistence rates.

Texas high school students in this sample earning a Regular diploma (non-college prep) had the lowest second-year persistence rate at 52.4 percent. Approximately 66.9 percent of students with Advanced diplomas and 79.6 percent of students with Advanced with Honors diplomas were retained in the second year.



Bachelor's Degree Completion

It is unknown whether the students in this 1997 cohort will show the same relationships between type of diploma and bachelor's degree completion as they did with first-year retention and second-year persistence measures. However, data collected by the US Department of Education (DOE) indicates that the rigor of a high school curriculum is indeed a strong predictor of bachelor degree completion. DOE also reports that type of high school curriculum is a better predictor of bachelor degree completion than either standardized test scores or high school GPA/class rank. Further, DOE states that the data show that the impact of a rigorous high school curriculum is particularly pronounced for African-American and Hispanic students.



CONCLUSIONS

The data in this study indicates that high school preparation is related to college success. High school students who earn a college-prep diploma, such as the Advanced or Advanced with Honors diploma, are more likely to participate in higher education, aspire to a bachelor's degree, earn a higher GPA, persist in higher education, and earn a bachelor's degree than students who earn a Regular high school diploma.

Identifying alternative admissions criteria that can be used to predict collegiate success should help in the contentious debate over the appropriate use of standardized test scores in the admissions process. The data demonstrate that high school diploma type, as an indicator of the level of rigor of high school education, can indicate how a student might perform in college. For this reason, high school diploma type should be considered for admissions purposes in addition to other criteria, including standardized tests, and where appropriate, as a substitute for standardized tests.

Alternative admissions criteria that predict collegiate success increases the admissions pool—perhaps including some students whose standardized test scores may not have identified them as viable candidates for collegiate study. Additionally, identifying and implementing reliable alternative admissions criteria moves the higher education community closer to embracing the reality of multiple measures to assess students, and challenges the notion that a single, one-shot standardized test score is the sole predictor of whether or not a student will be successful in collegiate study. Identifying alternative admissions criteria encourages higher education officials to use standardized tests as only one of multiple factors in the admissions process. While many college and university officials report that they already assess multiple factors in the admissions process, standardized test scores continue to be weighted heavily. Seeking to reduce the liability of reverse discrimination lawsuits, college and university officials have felt it necessary to be able to justify admission decisions, a factor that could encourage inappropriate use of standardized tests scores.

Identifying high school diploma type as an alternative admission criterion that can be used to predict collegiate success is only a beginning. If using this criterion is to successfully broaden the pool of students entering into higher education, it is important that counselors and parents among others encourage many more students to pursue and receive the Advance Diploma and the Advanced Diploma with Honors. Thereby, upon graduation, even before these students have attempted a standardized test, college and university officials will already have important information about how that particular student may perform during his or her years of collegiate study.



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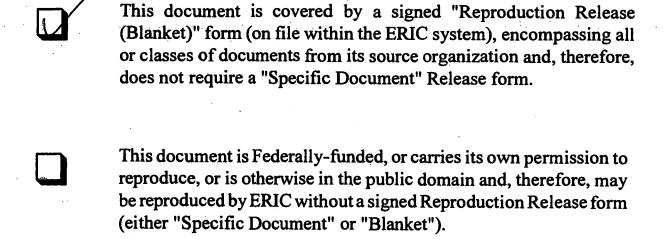
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